IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Douglas Clark, et al.

Group Art Unit: 2165

#23

Application No.: 09/334,256

Examiner: Forest Thompson

Filed: June 16, 1999

For: METHOD AND APPARATUS FOR PLANNING AND MONITORING MULTIPLE TASKS BASED ON USER DEFINED CRITERIA AND PREDICTIVE ABILITY

AFFIDAVIT OF COMMERCIAL SUCCESS UNDER 37 CFR 1.132

Commissioner for Patents
Washington, DC 20231

Dear Sir:

Applicant wishes to make a statement of the commercial success of the invention disclosed in the above-referenced application, in order to overcome their obviousness rejection asserted in the Final Rejection in the Office Action mailed October 22, 2001. This application is presently on Appeal. Pursuant to the requirements of M.P.E.P. §716.03, the following items are included in the affidavit: §716.03(a) an explanation of how the evidence of commercial success is commensurate with the scope of the claims; §716.03(b)(i) an explanation of how the commercial success is derived from the claimed invention; and §716.03(b)(ii) an explanation of how the commercial success flows from the functions and advantages disclosed in the specification.

A magazine article ("e-week", June 19, 2000, pages 70 and 83) describing the invention is enclosed, and the features described in that article are correlated with various claims from the below Claims Appendix. Additionally, a statement, supplied by the Assignee, of the sales figures of the claimed product is enclosed. Finally, a petition fee as set forth in 37 C.F.R. §1.17(h) is enclosed.

§716.03(a) COMMERCIAL SUCCESS COMMENSURATE WITH CLAIMS

This affidavit begins with a statement that the evidence of commercial success is indeed commensurate with the scope of the claims in the pending application. The item submitted herewith as evidence of commercial success is a magazine article describing the product which is the commercial manifestation of the above-referenced patent application ("e-week", June 19, 2000, pages 70 and 83).

The e-week article states that "Despite some last-minute political complications, Lockheed Martin delivered on time. After a year of effort, all four data centers were up and crunching numbers in March [2000]. The company plugged the whole [U.S. Census] process into the Web, not only shifting project management to an online, collaborative form but also employing an ASP-hosted tool that allows project activities to be modeled as objects and analyzed" (page 70, column 1, line 35 through column-2, line 5). "With the [tool], Lockheed Martin was able to predict how long a given activity would take, then identify and map time sinks and eliminate them on subsequent data center deployment phases" (page 70, column-2, lines 6-11).

The "ASP-hosted tool" referenced in the above quotation is distinctly claimed within the above-referenced patent application. Claim 1, for example, recites a method for modeling multiple tasks for multiple users comprising the steps of:

> breaking a project into said multiple tasks;
>
> activating a current **tasking horizon**, said tasking horizon comprising one of a plurality of time frames over which said multiple tasks can be completed;
>
> **selecting a language** for at least one of said multiple tasks;
>
> receiving an actual date for said at least one of said multiple tasks;
>
> receiving an estimated date for said at least one task;
>
> **calculating a first negative churn** if said received estimated date is created in or moved into said current tasking horizon;

calculating a first positive churn if said received estimated date is deleted or moved out of said current tasking horizon;

calculating a second positive churn if said received estimated date exists in said current tasking horizon and said received actual date is moved out of or is created outside of said current tasking horizon;

calculating a third positive churn is said received actual date is moved out of said current tasking horizon and an accompanying received estimated date is not in said current tasking horizon;

calculating a second negative churn when said received actual date is created in or is moved into said current tasking horizon and said received estimated date is not in said current tasking horizon; and

receiving language that corresponds to said actual date, **wherein a verb describes a reason for said actual date and for said churn.** (emphasis added)

The steps of calculating churn are highlighted in bold above because they relate to remarks in the "e-week" magazine article. Specifically, "e-week" discusses a consumer need for a software package which can "predict how long a given activity would take, then identify and map time sinks and eliminate them on subsequent data center deployment phases" (page 70, column-2, lines 6-11). These criteria correspond to the claimed calculation of churn emboldened above. Churn, as meant by Applicant, means to describe the movement of tasks in relation to a tasking horizon, and measure the predictive ability of an employee (09/334,256 specification, page 14, lines 15-17).

As shown above, the features of the present invention described by the purchaser (Lockheed Martin) as commercially desirable match those elements claimed by Applicant. Accordingly, the burden of establishing that the commercial success of the present invention is commensurate with the scope of the claims as required by M.P.E.P. §716.03(a) appears to be met.

§716.03(b)(i) COMMERCIAL SUCCESS DERIVES FROM INVENTION

The product's commercial success is directly derived from the invention. In support of this assertion, the "e-week" article an example of a an engineer Joe Smith installing a server. In such a scenario, the WorkLenz application tracks the installation task as an

object (page 83, column 1, lines 23-25). Associated with the activity would be the time spent on the activity, the **verb object** "install server", and the team member "Joe". Using that information, predictions can be made about how quickly Joe can get a server up and running, which is a valuable piece of information to have when doing a complex project that will be repeated by team members in other locations (page 83, column 1, line 25 through column 2, line 5).

The verb object highlighted in the above excerpt from "e-week" corresponds directly with the claimed "verb describing a reason for an actual date and for churn" as highlighted above in the reproduction of claim 1. Thus, a salient feature of the invention (verb) is described by a customer (Lockheed Martin) as valuable, and that feature directly corresponds with the verb recited in claim 1. Additionally, "e-week" states that using the WorkLenz product "got [the] Lockheed Martin [project completed] on time, on budget, and able to shave some 6 percent of deployment costs as a result of learning as the team went along (page 83, column 3, lines 16-19). Accordingly, for at least the above reasons, the burden of establishing that the commercial success derives from the invention appears to be met.

§716.03(b)(ii) COMMERCIAL SUCCESS FLOWS FROM SPECIFICATION

As shown above, the "e-week" article makes assertions regarding the value of the WorkLenz product's verb objects, and these features are clearly supported in the claims as excerpted above. These valuable features are also supported in the specification. Specifically, the WorkLenz product described in the article provides a system and method for enabling individual employees to plan their work within a limited tasking horizon. Employees track their progress using verbs that are designed to capture the reasons behind positive and negative predictive ability (specification, page 6, lines 1-2). Verbs may be selected to provide a series of potential answers to standard questions, such as why did you perform this task faster or slower than estimated. Verbs can also be broken down into employee dependent terms (health, well-being), task related terms (new computers not

working), environmental terms (snow, weather), as well as other descriptors (col. 6, lines 17-22). These verbs are analyzed and expected predictive error or risk is calculated from the results of that analysis, including classifying the reasons for churn (col. 14, lines 10-13). Churn includes reasons why a task was performed either faster (negative) or slower (positive) than planned, and measures the predictive ability of an employee (col. 14, lines 13-16). Thus, the features described in the "e-week" article are explicitly described in the specification. Accordingly, for at least the above reasons, the burden of establishing that the commercial success flows from the specification appears to be met.

As stated, a petition fee as set forth in 37 C.F.R. §1.17(h) is enclosed. If any additional fees are required they may be charged to Deposit Account No. 04-1073.

For at least the above reasons, it is respectfully requested that the Examiner reconsider and withdraw the Final Rejection of October 23, 2001.

Dated: April 9, 2002

Respectfully submitted,

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APPENDIX OF PENDING CLAIMS

1. A method for modeling multiple tasks for multiple users comprising the steps of:

breaking a project into said multiple tasks;

activating a current tasking horizon, said tasking horizon comprising one of a plurality of time frames over which said multiple tasks can be completed;

selecting a language for at least one of said multiple tasks;

receiving an actual date for said at least one of said multiple tasks;

receiving an estimated date for said at least one task;

calculating a first negative churn if said received estimated date is created in or moved into said current tasking horizon;

calculating a first positive churn if said received estimated date is deleted or moved out of said current tasking horizon;

calculating a second positive churn if said received estimated date exists in said current tasking horizon and said received actual date is moved out of or is created outside of said current tasking horizon;

calculating a third positive churn is said received actual date is moved out of said current tasking horizon and an accompanying received estimated date is not in said current tasking horizon;

calculating a second negative churn when said received actual date is created in or is moved into said current tasking horizon and said received estimated date is not in said current tasking horizon; and

receiving language that corresponds to said actual date, wherein a verb describes a reason for said actual date and for said churn.

2. The method as claimed in claim 1 further comprising the step of:

classifying said received verb as employee dependent.

3. The method as claimed in claim 1 further comprising the step of:

classifying said received verb as task dependent.

4. The method as claimed in claim 1 further comprising the step of:

classifying said received verb as environment dependent.

7. The method as claimed in claim 1 further comprising the steps of:

comparing said tasks of said project to previously performed tasks;

extracting previously performed task completion data, said data including previous churn data and risk factor data; and computing an expected task completion time based at least in part on said previously performed task completion data.

8. The method as claimed in claim 1 further comprising the steps of:

comparing said tasks of said project to previously performed tasks;

extracting a risk factor associated with said previously performed tasks;

and computing a new risk factor based at least in part on said extracted risk factor.

9. A method for modeling tasks comprising the steps of:

breaking a project into multiple tasks, wherein there is at least a first task and a second task;

selecting a current tasking horizon from a plurality of potential event horizons representing a plurality of timeframes;

selecting at least two verbs for said first task;

selecting at least two verbs for said second task;

assigning said first task to a first task assignment station;

assigning said second task to a second task assignment station;

receiving a predicted start date and a predicted completion data for said first task from said first task assignment station;

receiving a predicted start date and a predicted completion date for said second task from said second task assignment station;

receiving an actual start date and a first verb for said first task;

receiving an actual start date and a second verb for said second task;

computing churn of said first task;

computing churn of said second task;

computing a risk factor for said first task based on said first verb; and

computing a risk factor for said second task based on said second verb.

10. An apparatus for task modeling comprising:

a management module for breaking a project into tasks, selecting a tasking horizon and for assigning at least two verbs for at least one of said tasks;

a task assignment station for receiving said at least one task and for entering a predicted start date for said at least one task and for entering an actual start date;

wherein said management module and said task assignment station are operationally connected and wherein said management module receives said predicted start date and said actual start date and computes a churn and assigns a risk factor to said task based on at least one of said verbs, wherein said at least one verb describes a reason for said churn.

11. The method as claimed in claim 1 further comprising modifying said computed risk factor based on a subsequent churn value.

12. The method as claimed in claim 11 wherein said method results in a reduction of said churn.

13. The method as claimed in claim 1 wherein said actual dates comprise an actual start date and an actual stop date.

14. The method as claimed in claim 1 wherein said received estimated dates comprise an estimated start date and an estimated stop date.

15. The method as claimed in claim 1 further comprising assigning a risk factor to a second task which is dependent upon a first task.

16. The method as claimed in claim 9, wherein said second task is dependent on said first task.

17. A method for modeling tasks comprising the steps of:

breaking a project into tasks;

selecting a tasking horizon;

selecting at least two verbs for at least one of said tasks, each of said verbs is task dependent;

receiving a predicted start date and a predicted stop date for said at least one task;

receiving an actual start date and an actual stop date for said at least one task;

receiving one of said at least two verbs that corresponds to said actual start and stop dates, wherein said verb describes at least one reason for said actual start and stop dates;

comparing said predicted start and stop dates with said actual start and stop dates;

computing churn of said at least one task; and

reviewing said churn in view of said at least one verb, and assigning a risk factor to said task based on said review.

18. The method as claimed in claim 16, wherein said risk factor is equal to a percentage of the time between said predicted start and stop dates.

19. The method as claimed in claim 7, wherein said previous risk factor is task dependent.

20. The apparatus as claimed in claim 10, wherein said apparatus classifies said churn as positive churn or negative churn.

21. The apparatus as claimed in claim 19, wherein said apparatus is utilized in a churn monitoring program to reduce said churn.

22. An apparatus for task modeling comprising:

a management module for breaking a project into tasks, selecting a tasking horizon and for assigning at least two verbs for at least one of said tasks;

a task assignment station for receiving said at least one task and for entering a predicted start and stop date for said at least one task and for entering an actual start and stop date;

wherein said management module and said task assignment station are operationally connected and wherein said management module receives said predicted start and stop dates and said actual start and stop dates and computes a churn and assigns a risk factor to said task based on at least one of said verbs having a reason associated therewith used to describe said churn.

23. A method for modeling tasks comprising the steps of:

breaking a project into a plurality of tasks;

selecting a tasking horizon;

selecting at least two verbs for at least one of said tasks;

receiving a predicted start date for said at least one task;

receiving an actual start date for said at least one task;

receiving one of said at least two verbs that corresponds to said actual start date, wherein said verb describes a reason for said actual start date;

comparing said predicted start date with said actual start date;

computing churn of said at least one task;

computing a risk factor based at least in part on at least one of said computed churn and

MANAGING E-BIZ // Data processing

CRUNCHING AT WEB SPEED

Got 120 million forms to process? Web-based work analysis gets data centers deployed faster

By Lisa Vaas

IT'S ONE THING TO HAVE UNCLE Sam knock on your door, thrust a census form at you and stay on your doorstep until you've answered all his questions. It's quite another to have him tapping his foot and keeping one eye on his wristwatch, impatiently demanding that you put a rush job on deploying the four major data centers the government needs to crunch 120 million census questionnaires into useful information.

That was the nerve-racking situation facing Lockheed Martin Corp., the world's second-largest aerospace and defense company, which two years ago won a contract to integrate the core systems used in the massive decennial census project now under way.

The project—dubbed DCS (Data Capture System) 2000—called for Lockheed Martin's technology services division to roll out the four data centers sequentially and get better and faster at it each time. Unless Lockheed Martin delivered, President Clinton wouldn't have census results by the end-of-year 2000 deadline mandated by law.

Uncle Sam and Lockheed Martin can breathe a bit easier. Despite some last-minute political complications, Lockheed Martin delivered on time.

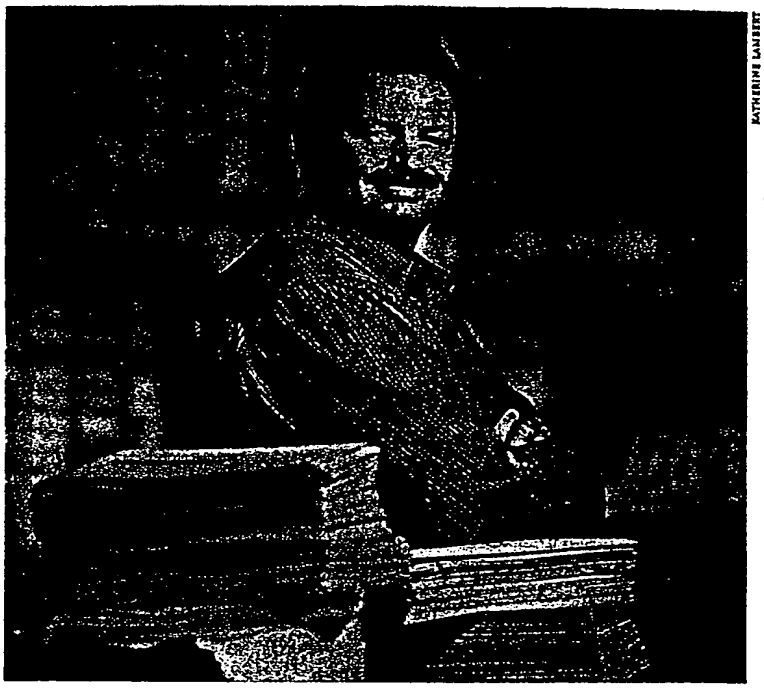
After a year of effort, all four data centers were up and crunching numbers in March. What was Lockheed Martin's project management secret? The company plugged the whole process into the Web, not only shifting project management to an online, collaborative form but also employing an ASP (application service provider)-hosted tool that allows project activities to be modeled as objects and analyzed.

With the application, Lockheed Martin was able to predict how long a given activity would take, then identify and map time sinks and eliminate them on subsequent data center deployment phases.

"We knew time would be reduced and we'd have to do it faster from site to site," said Clyde Relick, program manager for DCS 2000, in Bowie, Md. "So we were doing development as we were doing deployment."

That ought to ring a bell with e-businesses that are treading the new economy's rapidly accelerating hamster wheel, experts say.

Project turnaround time "is very much decreasing," said Gopal Kapur, an analyst with the Center for Project Management, in San Ramon, Calif. "You've got to get very aggressive with things like deliverable-based planning ... and well-defined completion criteria."



KATHERINE LAMBERT

Lockheed Martin's Relick got four data centers ready to process Census 2000.

Sample this complexity

NOT ONLY DID THE DCS 2000 PROJECT have a can't-miss deadline, it was complicated.

Twenty Lockheed Martin team members, spread among the four data centers, in Baltimore; Jefferson, Ind.; Pomona, Calif.; and Phoenix; the Census Bureau's headquarters, in Suitland, Md.; and the Bureau's project office, in Lanham, Md., had to collaborate on various activities, including setting up some 20,000 pieces of equipment and applications.

The equipment included Eastman Kodak Co. digital scanners, to capture a picture of each census form, and high-end algorithmic applications, running on Windows NT servers and networks, to take snapshots of handwriting and check marks on census forms and transform them into usable data in the form of ASCII characters. That application was developed in-house at Lockheed Martin, of Bethesda, Md.

Making the project even more complex was a midcourse correction by Congress.

Originally, the Census Bureau planned to round out the census numbers by using statistical sampling. However, late last year, Congress disallowed the sampling plan and told the Bureau to collect missing data the traditional way, by going door to door to seek out nonrespondents.

That meant more forms would be getting to the data processing centers, some of them later than anticipated. And that meant Lockheed Martin needed to cut as much time as possible out of the data center deployment process.

"The problem was to manage a complex deployment and installation—and at the same time get better at it—or we weren't going to be successful," Relick said.

Online project modeling allowed Lockheed Martin to continually trim time off the data center rollouts. Using WorkLenz, an ASP-hosted application from Washington-based Métier Ltd., Lockheed Martin was able to do real-time analysis of all the tasks that are performed [continued on Page 83]

Tick, tick, tick

- **Company** Lockheed Martin Corp., Bethesda, Md.
- **Problem** Lockheed knew the clock would tick faster as it neared completion of Data Capture System 2000, a massive project that entailed setting up four data processing centers nationwide that would process some 85 million census forms for the U.S. Census Bureau. Lockheed needed to refine a process for rolling out data centers by learning from previous rollouts where time had been squandered.
- **Solution** Lockheed used Métier Ltd.'s WorkLenz, an application service provider-hosted, Internet-based tool that tracks and analyzes work activity, flags problems and models project successes.
- **Result** Lockheed rolled out the first data center in 90 days, the second and third centers were up in 60 days each, and the final center was number-crunching away in a mere 45 days.

STAN GIBSON: JUST MANAGING

WHAT, ME PLAN? IN THE AGE OF THE INTERNET?

IN THE "READY! FIRE! AIM!" WORLD OF E-COMMERCE, WHAT IS the role of that staid discipline, project management? ■ The fact is, if you perform by-the-book project management, you will probably not be able to meet your competitive targets for e-business. And yet, project management is a science that has a track record going back decades. Its core concepts are as old as work itself. No matter how hard you try, you can't eliminate planning altogether. So project management is being forced to adapt to e-business, not the other way around. The result is something you could call "project management light."

"A lot of classical project management goes out the window," said Sharon Kaminecki, a project manager with IBM Global Services, in Chicago. Kaminecki is dedicated to e-business engagements for IBM and is a member of the Project Management Institute (www.pmi.org). Such steps as design, eview, walk-through, documentation, testing and risk management are often abridged. "We may not like the bypassing of project management procedures, but it is just the way it is," she said. "People just react, they don't plan."

Still, some core principles cannot be sacrificed. "Business objectives and business priorities: That's what I communicate to the team members," Kaminecki said. Everything else is optional.

OK, so how do you know if you want to build an e-commerce site in the first place? Here's where project management's dusty "feasibility study" comes in. Of course it makes sense to scout the territory, but you won't get to do that if people think you're pushing "paralysis by analysis." Change your terminology from feasibility study to "experiment," said Nick Dragisic, CIO at Association Management Systems, a trade association management company in Naperville, Ill.

"People say, 'Oh great, just what we need, another study,'" said Dragisic, who is also a member of the Project Management Institute. "It's much easier to get money and test it out if you call it an experiment." Your basic ingredients are: defined objectives, a cost-benefit report, evaluation of alternatives and a written task plan. Dragisic said you also need to keep in mind that you'll want ongoing funding as well as that initial bundle. So you should build in milestones that, when reached, will demonstrate step-by-step progress.

PROJECT MANAGEMENT IS BEING FORCED TO ADAPT TO E-BUSINESS, NOT THE OTHER WAY AROUND.

Overall, this stealth approach to planning, while effective in e-business, has its downside if you're a professional project manager. Said Kaminecki: "Sometimes projects are so small and fast that a lot of companies don't want to pay for a project manager."

As e-business becomes more mature and companies start to expect, yes, revenue from their efforts, project management is bound to become more accepted. But at this point, it's clear that the venerable science faces an uphill struggle, and like many things in the wake of the Web, it will probably never be the same. *e*

When all else fails, do you resort to planning? Let me know at stan_gibson@ziffdavis.com.

WORK ANALYSIS *from Page 70*

to install data processing centers, including unplanned events.

Wasting data

OFTEN, EXPERTS SAY, THAT KIND OF analysis is not possible because the core information is squandered. For instance, a project manager typically asks a team member something like, "So, what are you doing?" The member replies, "I did this, I didn't do that, these are the problems I had." As part of a telephone conversation or e-mail, that information can be lost.

But with an online application that can store time-tracking and chat in a relational database, Lockheed Martin was instead able to pinpoint what problems arose and which engineers accomplished what tasks quickest.

For example: If engineer Joe Smith installs a server, the WorkLenz application tracks the task as an object. Associated with the activity would be the time spent on the activity, the verb object, "install server," and the team member, "Joe." Using that information, predictions can be made about how quickly Joe can get a server up and running. That's a valuable piece of information to have when you're doing a complex project that will be repeated by team members in other locations. When the activity is repeated, the first rollout's surprises became the second's planned events.

"On the first site, Baltimore, we were able to track all the unplanned tasks we'd encountered, as well as delays," Relick said. "We could tell how much we were on schedule by how well we reacted to unplanned tasks. ... Say we were two weeks into the project, and there was a certain thing that had to be done. If we saw we had to push off certain work because certain equipment was delivered late or underestimated resources were needed, we'd graph the amount of unplanned work, and we could see trends during certain periods of the schedule."

Contrast that to how Lockheed Martin would have dealt with lessons learned before it turned to Web-based activity modeling. "Generally, what [we used to do] is set a plan; execute to the plan; and at the end, you'd get together with lessons learned and say, 'What were all the things that didn't go the way we thought?'" Relick said. "Then we'd try to remember and try to encapsulate them into our next project plan, which was, of course, only a week away. With [WorkLenz], we did that on a daily basis."

So how'd it all pan out? Quite well. With rollout teams learning what to do, what not to do and how much time tasks will take from teams further along, the first center was up in 90 days, the second and third went up in 60 days each, and the last center was ready to tackle piles of census forms in only 45 days. That got Lockheed Martin in on time, on budget and able to shave some 6 percent off deployment costs as a result of learning as the team went along, Relick said.

Lockheed Martin's ability to learn at Web speed is one factor helping the Census Bureau churn through the massive DCS 2000 project. But the really good news is that all the lessons Lockheed Martin piled up and stored in its object-oriented database aren't going anywhere. That will be a big boost when the next census, in 2010, rolls around. *e*

VIRUS BARRIERS *from Page 78*

ty tools vendor or add products from a small, new supplier. Like High Jump's McCoy, most would prefer to stick with their current large tool providers. McCoy runs Symantec's Norton suite of virus-scanning products on his company's servers and 90 workstations. He also outsources security to Verio Inc., of Englewood, Colo. Verio provides managed security using WatchGuard Technologies Inc.'s LiveService Product and virus-scanning updates from Trend Micro Inc. Such large vendors aren't shipping proactive, behavior-based tools yet, but both say they're working on it.

"If [IT managers are] looking for something along the lines of Finjan or Pelican software, the preference seems to be that they'd rather go back to the anti-virus vendor and wait," Hemmendinger said. "But IT managers know this is the future of security."

Which is why IT managers such as McCoy are crossing their fingers, hoping that traditional anti-virus vendors will come out with similar products before the next big virus storms their security fences. *e*